SCHWEIZER 269 SERIES

SCHWEIZER SERVICE BULLETIN

MANDATORY MANDATORY MANDATORY

SUBJECT: PRIMER HOSE REPLACEMENT

MODELS AFFECTED:
- All Model 269C-1 Helicopters prior to S/N 0066.
- All Model 269C-1 Helicopters equipped with replacement primer hose assembly obtained from Schweizer Aircraft prior to 23 Sep 1997.
- All Model 269C-1 Helicopters modified in accordance with Service Bulletin C1B-005, dated 09 Oct 1997 - unless complete replacement hose assemblies were installed

TIME OF COMPLIANCE:
- Upon receipt of this service bulletin, perform Part I daily until Part II is complied with.
- Aircraft with more than 12 months in service, perform Part II within 2 months or as required by Part I, whichever occurs first.
- Aircraft in service 12 months or less, perform Part II prior to reaching 14 months in service or as required by Part I, whichever occurs first.
- Aircraft modified in accordance with Service Bulletin C1B-005, perform Part II within 2 months - unless complete replacement hose assemblies were installed

REFERENCE:
- Model 269C-1 Illustrated Parts Catalog, Section 5.

PREFACE:
- Certain primer hose assemblies manufactured from Aeroquip, Type 601 hose, have developed leaks after approximately one year in service (see Aeroquip Service Bulletin attached). Additionally, some helicopters have been delivered that did not incorporate the required firesleeving on the primer hoses. Information in this Service Bulletin provides instructions for assembling and installing new primer hoses manufactured from Aeroquip, type 701 hose, and incorporating firesleeving on the subject aircraft.
- On aircraft modified in accordance with Service Bulletin C1B-005, a longer firesleeve (that covers the hose end fittings) must be installed - unless complete replacement hose assemblies were installed.
- As an option to installing firesleeving, new hose assemblies (with factory installed firesleeving) may be used.

MATERIALS

Nomenclature	Part Number	Quantity	Source
Firesleeve†	AE102/624-7 (Length as required for specific hose)	2	Aeroquip/SAC
Hose†	701-3	2	Aeroquip/SAC

†Part not required if hose assemblies (page 2) are installed (Two 21 inch hoses (RH PIC), or one 16 inch hose and one 30.5 inch hose (LH PIC)

*Supersedes C1B-005, Dated 09 Oct 1997

(▌)Denotes portion of text added or revised

MATERIALS (Continued)

Nomenclature	Part Number	Quantity	Source
Clamp	MS21919WDG10	1	Locally/SAC
Hose Assembly, RH PIC	269A8327-323	2	SAC
Hose Assembly, LH PIC	269A8327-331	1	SAC
Hose Assembly, LH PIC	269A8327-327	1	SAC

PROCEDURE:

PART I PRIMER HOSE INSPECTION

Inspect primer hoses for evidence of fuel leakage (discoloration, staining, etc.). If leakage is evident, perform Part II prior to further flight.

PART II PRIMER HOSE REPLACEMENT

a. Gain access to primer pump.

b. Remove adel clamp and cut all ty-raps associated with the two primer pump hoses and frame (Figure 1-1). Remove the two primer hoses from the aircraft.

NOTE

It is not necessary to replace “T” fitting unless it is damaged.

If new hose assemblies (with factory installed firesleeving) are used, discard removed primer hoses and proceed to step f. below.

c. Remove end fittings from hoses and retain for reuse on new hoses. (If hoses were previously modified according to C1B-005, discard old firesleeving and proceed to step e. below.)

d. Using original end fittings, fabricate new hoses using Aeroquip 701 hose in accordance with Aeroquip hose fabrication procedures (Figure 1-2). Hoses are to be same length as original hoses. Required proof pressure in 100 PSI.

e. Temporarily plug hose ends to prevent entry of foreign objects. Install firesleeve on each hose and secure with two pieces of stainless steel safety wire on each hose as shown on Figure 1-1. Remove temporary plugs.

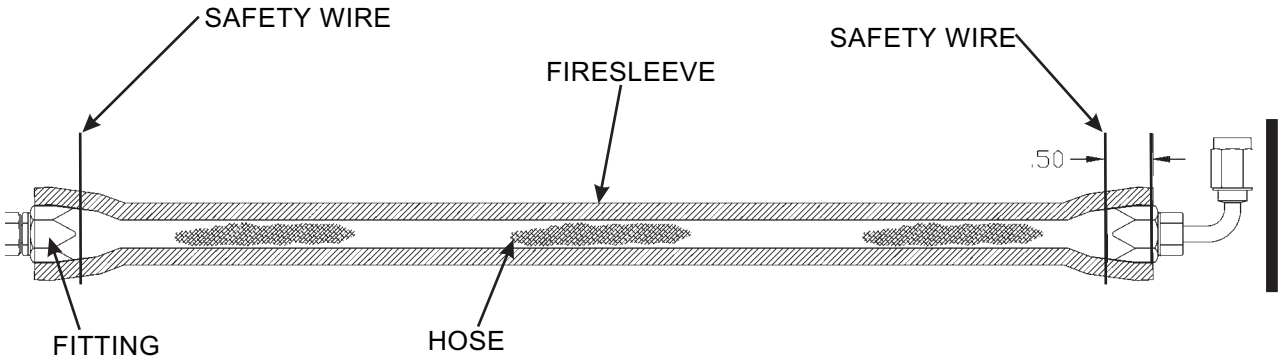
f. Install new hose assemblies (or install hoses modified according to steps c., d., and e. above) in aircraft in reverse order of removal.

g. Secure hoses to the frame using ty-raps and install new adel clamp (P/N MS21919WDG10).

h. Reinstall components removed in step a.

i. Record compliance of this bulletin in the aircraft records.

WEIGHT AND BALANCE
Weight and Balance Not Affected.



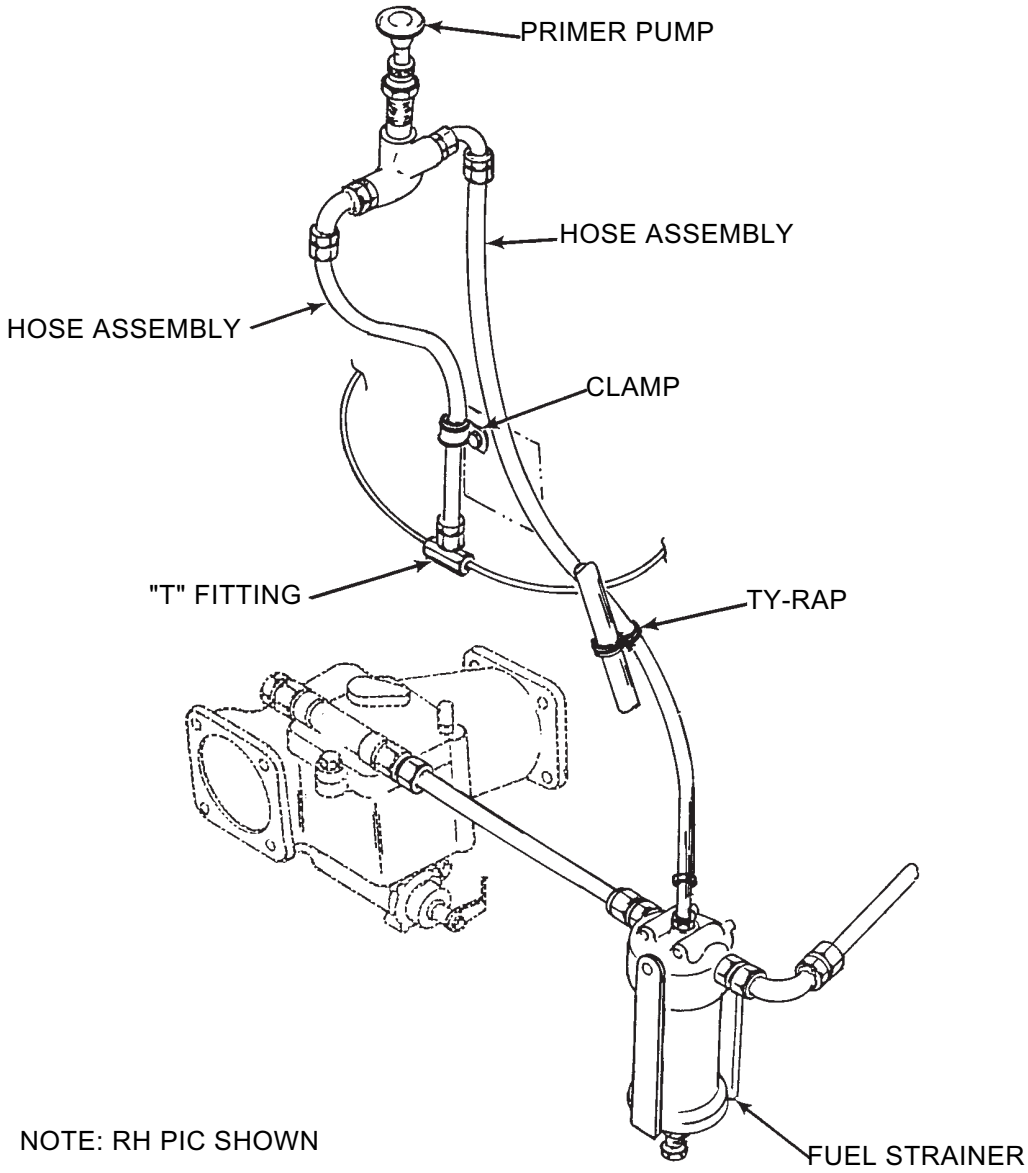
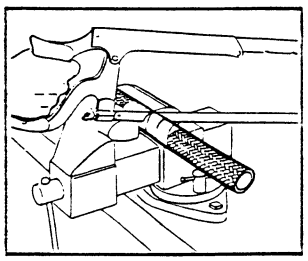


Figure 1-1. FIRESLEEVE INSTALLATION ON PRIMER HOSES.

How to assemble AE701 Hose Assemblies with *"little gem"* Straight Fittings and Elbows

To make hose assembly of length "L", cut hose to length "J". Obtain "J" length by subtracting proper fitting allowances. See "B" dimensions on fitting pages.

STRAIGHT FITTINGS

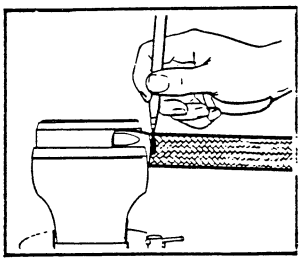


Step 1

Cut hose squarely to length. Use hose cut-off machine or fine tooth hacksaw. To minimize wire braid flare-out, wrap hose with masking tape and saw through tape. Remove tape before step 2.

Step 2

Insert hose in socket with a twisting, pushing motion until hose is in line with back of socket threads.

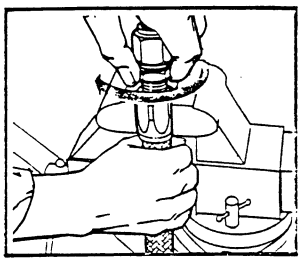


Step 3

Important—mark hose position around hose at rear of socket. Use a grease pencil, painted line or tape.

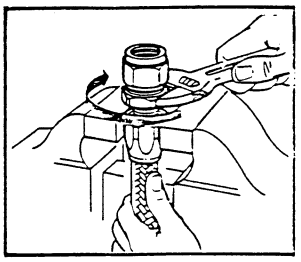
Step 4

Lubricate inside of hose and nipple threads liberally. Use SAE30 lubricating oil. Avoid getting oil in the cutting spur of the nipple.



Step 5

Carefully insert nipple and engage nipple and socket threads while holding hose in position with other hand. Make sure that hose does not push out of socket by observing mark made in step 3.



Step 6

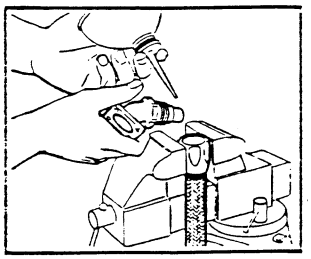
Complete assembly using wrench while continuing to hold in position. Maximum allowable gap is .041 inches in sizes 3, 4 and 5, and .031 inches in size 6 and up.

Step 7

IMPORTANT—check for hose push-out by observing hose position mark. None should be evident. Clean, inspect and proof test.

Note: Hose push-out after proof test should not exceed 1/32 inch on size 12 and up. None is allowable on smaller sizes.

ELBOW FITTINGS



Step 1

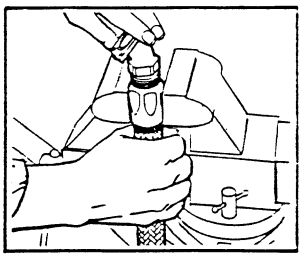
Follow through steps 1, 2, and 3, above.

Step 2

Flange elbow fittings. Drop flange over threaded end of nipple. Nipple shoulder must fit into counterbore of flange.

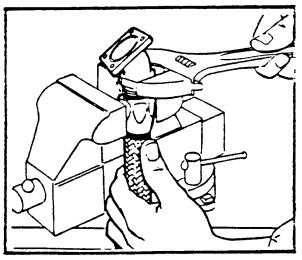
Step 3

Lubricate inside of hose and nipple threads liberally. Use SAE30 lubricating oil. Avoid getting oil in the cutting spur of the nipple.



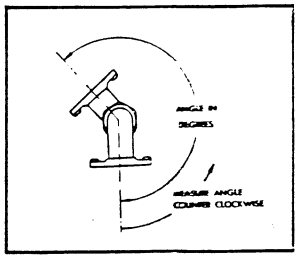
Step 4

Carefully insert nipple and engage nipple and socket threads while holding hose in position with other hand. Make sure hose does not push out of socket by observing mark.



Step 5

Complete assembly using wrench on elbow hex while continuing to hold hose in position. Tighten until hex is snug against socket. On forged elbow, use wrench on forging flats. Tighten until shoulder is snug against socket.



Step 6

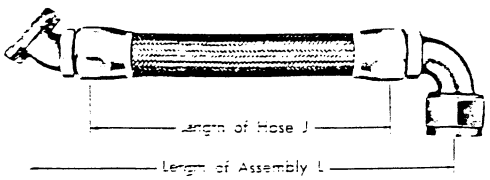
Adjustments may be necessary to obtain the desired position angle between two elbows. In order to minimize backing off elbows to position, the following procedure should supplement step 5:

a. Tighten both elbows to within .031 inches of socket then start to position for relative angle between elbows.

b. Finish assembly by adjusting both elbows. Backing-off to position should be avoided and in no case should exceed ¼ turn. Maximum allowable gap between hex and socket is .031 inches.

Step 7

IMPORTANT—check for hose push-out. See step 6 above. Clean, inspect and proof test.



To make hose assembly of length "L", cut hose to length "J". Obtain "J" length by subtracting proper fitting allowances. See "B" dimensions on Fitting pages.

Note: Hose push-out after proof test should not exceed 1/32 inch on size 12 and up. None is allowable in smaller sizes.

Figure 1-2. AEROQUIP TYPE AE701 HOSE ASSEMBLY

Aeroquip Corporation
Aerospace Group
300 South East Avenue
Jackson, Michigan 49203-1972
517/787-8121
Fax: 517/787-5758

Aeroquip
A TRINOVA Company

AEROQUIP SERVICE BULLETIN

TO OWNERS/OPERATORS OF ALL GENERAL AVIATION AIRCRAFT USING AVIATION GASOLINES (E.G., INCLUDING, BUT NOT LIMITED TO, 100 OCTANE LOW LEAD, HIGH OCTANE AUTOMOTIVE UNLEADED, ETC., HEREINAFTER REFERRED TO AS "AVIATION GASOLINE").

Aeroquip Corporation's Aerospace Group has recorded several failures of its 601-type hose over the past 12-month period. The subject hose meets all required specifications, however, based upon data accumulated to date, it appears that the use of this hose in fuel systems which carry AVIATION GASOLINE is adversely affecting the life expectancy and performance which Aeroquip has historically experienced with this type of hose. Aeroquip has seen degradation of the elastomeric inner tube which has resulted in the tube cracking, which, in turn, has caused leaking of the 601 hose in these limited types of applications. Based on the data which Aeroquip has accumulated to date, it appears that this phenomenon is occurring after approximately two (2) years installation time (independent of actual service hours on the subject hose). **To the extent your aircraft may be affected by this phenomenon, Aeroquip recommends that you inspect your aircraft to determine:** (a) if your aircraft has 601-type hose fuel lines; and (b) the age and condition of said hoses. Aeroquip strongly recommends that any 601 hose, which is approaching, or has more than two (2) years in an AVIATION GASOLINE application, be replaced in accordance with the recommended action outlined in this Service Bulletin.

Note: This Service Bulletin does not apply to applications using Jet A, JP4, JP5, or JP8 grades of fuel commonly used for turbine/jet engines. It also does not apply to other fluids such as lubricating oils, REF. MIL-L-7808 or MIL-L-23699.

HOW TO IDENTIFY 601 HOSE ASSEMBLIES AND AGE:

IDENTIFICATION:

I. Aeroquip 601 hoses have a red socket

II. Locate metal identification tag (see example)

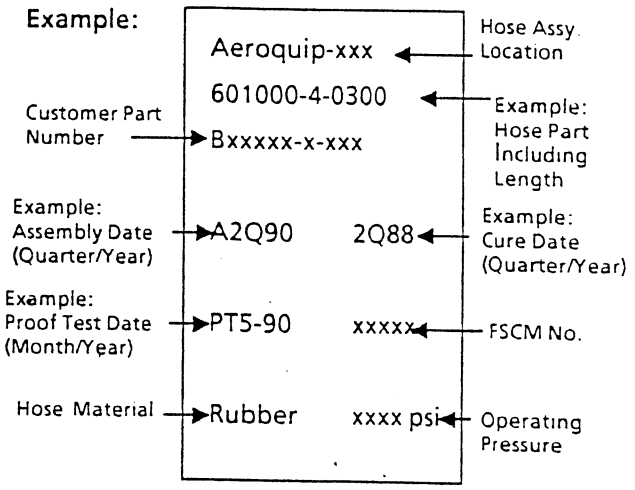
- 601 hoses typically begin with part number 601xxx
- Hoses that begin with AE701xxxx are not covered by this Service Bulletin. Most Cessna Twins use AE701 type hose.

DETERMINING AGE:

I. Review maintenance log books to determine if hose has been installed for two years.

II. If maintenance records are not available, refer to the assembly date quarter/year (see example). Any hose with an assembly date of A4Q90 or before should be considered to have been installed for two years or more.

III. If no maintenance records or identification tag is available, the hose should be removed and replaced.



RECOMMENDED ACTION:

As you know, all rubber hose, regardless of the nature of the application, experiences degradation over time. However, the current phenomenon which Aeroquip is observing with its 601 hose appears to be caused and accelerated by the expanding use of low-lead AVIATION GASOLINE in general aviation aircraft. Current aviation trends indicate that low-lead, and eventually no-lead, fuels will be used in ever-expanding and broader applications in the future. **For those reasons, Aeroquip strongly recommends replacement of the subject 601 hose with Teflon* hose assemblies.** Years of research and service experience in the aviation industry indicates that superior performance and longer service life can be achieved through the use of Teflon hose.

If you choose to replace your current 601 hose assemblies with rubber hose, Aeroquip strongly recommends regular, periodic inspection and replacement of said hoses after approximately two years installation time. Although Teflon hose

*Teflon is a registered trademark of DuPont

assemblies should also be subjected to regular periodic inspection, **Teflon is normally unaffected by many of the operating variables which contribute to rubber hose degradation, and will give you superior performance and longer service life.** Teflon hose alternates are fully approved to FAA TSO C53 and TSO C75.

Aeroquip has established a comprehensive substitution program under which owners/ operators may obtain Teflon hoses at a price which is approximately 10 to 20 percent lower than its 601 equivalent. (Price difference will vary according to configuration.) For more detailed information regarding this program, please contact one of the distributors listed and provide the distributor with the following information:

Owner's Name:

Address:

Telephone Number:

Aircraft Registration Number:

Hose Assembly Part Number or Description:

Aircraft Type:

Number of Hours Service:

PARTICIPATING DISTRIBUTORS

UNITED STATES

Aero Hardware & Supply, Inc.
4301 N.W. 36th Street
Miami Springs, FL 33166
Phone: 800-633-3997
Contact: Ms. Marty Pardo
Fax: 305-883-6179

Airparts Company, Inc.
5801 West Harry
Wichita, KS 67277
Phone: 316-943-2377
Contact: Pete Pankratz
Fax: 316-943-1023

Avsco
3820 N. Liberty Street
Winston-Salem, NC 27105
Phone: 919-767-5993
Contact: Steve Stayschich
Fax: 919-767-5277

Cosgrove Aircraft Service, Inc.
70 Oser Avenue
Hauppauge, NY 11788
Phone: 516-231-6111
Contact: Quentin Nieman
Fax: 516-231-6128

Cooper Aviation Supply Co.
2149 East Pratt Blvd.
Elk Grove Village, IL 60007
Phone: 800-654-4944
Contact: Brian Bradford
Fax: 708-364-0223

Eastern Aero Supply, Inc.
Municipal Airport
Millville, NJ 08332
Phone: 609-825-2500
Contact: Richard B Federici
Fax: 609-825-3073

Falcon Crest Aviation Supply
7798 Braniff
Houston, TX 77061
Phone: 713-644-2290
Contact: Steve Balko
Fax: 713-644-0356

Herber Aircraft Service, Inc.
1401 E. Franklin Avenue
El Segundo, CA 90245-4307
Phone: 310-322-9575
Contact: Dave Antonopoulos
Fax: 310-322-1875

Hoses Unlimited, Inc
618 Doolittle Drive
San Leandro, CA 94577
Phone: 510-632-4477
Contact: Sandra Hanson
Fax: 510-632-7763

Nelson-Dunn, Inc.
940 South Vail Avenue
Montebello, CA 90640
Phone: 310-724-3705
Contact: Dave Dodwell
Fax: 310-722-8136

Ni-Cad Inc.
55215 Mayflower Rd.
South Bend, IN 46628
Phone: 219-287-5905
Contact: Phil McClure
Fax: 219-287-1267

Omaha Airplane Supply
Eppley Airfield
Omaha, NE 68119
Phone: 402-422-6666
Contact: Dick George
Fax: 402-341-7895

Superior Air Parts, Inc
15800 Midway Rd.
Dallas, TX 75244
Phone: 800-487-4673
Contact: Kevin Housh
Fax: 214-991-4396

Varga Enterprises, Inc.
2350 South Airport Blvd.
Chandler, AZ 85249
Phone: 602-963-6936
Contact: Tammy Moncivaiz
Fax: 602-899-0324

CANADA

Leavens Aviation
2555 Derry Road, East
Mississauga, Ontario L4T 1A1
Phone: 416-678-1234
Contact: Russ Anderson
Fax: 416-678-7028

Tuboquip, Inc.
849 McCaffrey
Saint-Laurent, Quebec H4T 1N3
Phone: 514-341-3511
Contact: Dennis Jeanotte
Fax: 514-341-0681

Wesco Aircraft Canada, Ltd.
6175 Kestrel Road
Mississauga, Ontario L5T 1Z2
Phone: 416-670-2624
Contact: Wes Armstrong
Fax: 416-670-3637